



Mobile : +91 97429 59595
Tele/Fax : 080-2632 2565
E-mail : civilexpertsLtd@gmail.com
URL : www.civilexperts.in

Building Material Testing | Bridge Load Testing | Structural Strengthening Solutions | Quality Control / Assurance / Audit
Proof Checking (Structural Designs & Drawings) | Soil Stabilization and Shoring Services | Non - Destructive Testing

NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.: CECTC/BBMP/KRIDL/W.No.14/SAND-Gradation/2017-18

: 20.05.2017

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

Client : Executive Engineer, Dasarahalli Division, BBMP, Bangalore.
Agency : Technical Manager (West), KRIDL, BBMP, Bangalore.
Name of Work : Improvements to 2nd, 3rd, 4th, 5th & 6th cross roads at Navy layout in Bagalagunte in Ward No.14, BBMP, Bangalore.
Technical Reference : IS : 2386 Part 1 - 1963 RA-2007
Sample ID : Fine Aggregates
Date of Testing : 20.05.2017

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	92.50	90-100	90-100	90-100	95-100
2.36	79.30	60-95	75-100	85-100	95-100
1.18	60.40	30-70	55-90	75-100	90-100
600 Micron	40.80	15-34	35-59	60-79	80-100
300 Micron	13.80	5-20	8-30	12-40	15-50
150 Micron	4.30	0-10	0-10	0-10	0-15

Remarks : This sample is under Zone-II specific limits.

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

For Civil Experts Consultants

G. Mohy

Authorised Signatory

[Signature]
TESTED BY: *[Signature]*
DATE: *[Signature]*
BY: *[Signature]*
DATE: *[Signature]*



**CIVIL
XPERTS**

ISO 9001:2008

CONSULTANTS & TESTING CENTER

174, Sri Ranga Complex
Amrutha Nagar Main Road
New Bank Colony, Konanakunte
Bangalore - 560 062.

Mobile : +91 97429 59595

Tele/Fax : 080-2632 2565

E-mail : civilexperts1td@gmail.com

URL : www.civilexperts.in

NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.:

CECTC/BBMP/KRIDL/W.No.14/WMM/AL/2017-18

Date : 03.06.2017

**ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-11**

Client : **Executive Engineer, Dasarahalli Division, BBMP, Bangalore.**
Agency : **Technical Manager (West), KRIDL, BBMP, Bangalore.**
Name of Work : **Improvements to 2nd, 3rd, 4th, 5th & 6th cross roads at Navy layout in Bagalagunte in Ward No.14, BBMP, Bangalore.**
Date of Testing : 03.06.2017
Material : Wet Mix Macadam
Sample Location : WMM Mix Plant

As per MORTH Table 400-11

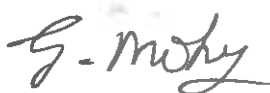
Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit	21.20	
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.


G. Mohy
Authorised Signatory

For Civil Experts Consultants


Authorised Signatory



**CIVIL
EXPERTS**

ISO 9001:2008

CONSULTANTS & TESTING CENTER

174, Sri Ranga Complex
Amrutha Nagar Main Road
New Bank Colony, Konanakunte
Bangalore - 560 062.

Mobile : +91 97429 59595

Tele/Fax : 080-2632 2565

E-mail : civilexperts1td@gmail.com

URL : www.civilexperts.in

NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.: CECTC/BBMP/KRIDL/W.No.14/WMM/AIV/2017-18

Date: 03.06.2017

Aggregate Impact Value

IS: 2386 Part IV

Client	Executive Engineer, Dasarahalli Division, BBMP, Bangalore.
Agency	Technical Manager (West), KRIDL, BBMP, Bangalore.
Name of the Work	Improvements to 2nd, 3rd, 4th, 5th & 6th cross roads at Navy layout in Bagalagunte in Ward No.14, BBMP, Bangalore.
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	03.06.2017

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	366	370	371	
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	84	86	88	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	282	284	283	
4	Aggregate Impact value = percent fines	22.95	23.24	23.72	23.30
	$100 * (W_2 / W_1) \%$				

Comments:

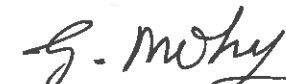
→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

- This test report should not be reproduced except in full, without written approval of the laboratory
- The results indicated above are based on the tests carried out on the samples received in the laboratory
- Any Query regarding the report must be reported within 15 days from the date of testing.

For Civil Experts Consultants


Authorised Signatory


Authorised Signatory

Lab No.: CECTC/BBMP/KRIDL/W.No.14/BM/AIV/2017-18

08.06.2017

Aggregate Impact Value

IS: 2386 Part IV

Client	Executive Engineer, Dasarahalli Division, BBMP, Bangalore.
Agency	Technical Manager(West), KRIDL, BBMP, Bangalore.
Name of the Work	Improvements to 2nd, 3rd, 4th, 5th & 6th cross roads at Navy layout in Bagalagunte in Ward No.14, BBMP, Bangalore.
Source / Location	Hotmix Plant, Bangalore
Type of Mix	Bituminous Macadam
Date of Testing	08.06.2017

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	363	365	367	22.65
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	81	83	84	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	282	282	283	
4	Aggregate Impact value = percent fines	22.31	22.74	22.89	
	$100 * (W_2/W_1) \%$				22.65

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Macadam is 30%

Note:

- This test report should not be reproduced except in full, without written approval of the laboratory
- The results indicated above are based on the tests carried out on the samples recieved in the laboratory
- Any Query regarding the report must be reported within 15 days from the date of testing

[Signature]
For Civil Experts Consultants
Authorised Signatory

[Signature]
For Civil Experts Consultants
Authorised Signatory

Job No.: CECTC/BBMP/KRIDL/W.No.14/BM/Shape/2017-18 Date: 08.06.2017

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	Executive Engineer, Dasarahalli Division, BBMP, Bangalore.											
Agency	Technical Manager(West), KRIDL, BBMP, Bangalore.											
Name of Work	Improvements to 2nd, 3rd, 4th, 5th & 6th cross roads at Navy layout in Bagalagunte in Ward No.14, BBMP, Bangalore.											
Technical Reference	IS 2386(Part 1) 1963 (RA 2007)											
Type of Mix	Bituminious Macadam											
Date of Testing	08.06.2017											
Passing through IS Sieve, mm	Retained On IS Sieve, mm	Weight of Sieved Fraction (W) gms	Proportion of Size range in the sample, X = $100 \times W / \Sigma W$	Weight of pieces of aggregates of the range, (P) in gms	Thickness gauge size, mm	Weight of flaky particles (F) in gms	Percentage by Weight of flaky aggregates in gms Y = $100 \times F / P$	Weighted Percentage of flaky aggregates in gms XY = X x Y	Weight of fraction consisting of at least 200 Pieces in gms	Length gauge size in mm	Weight of aggregates in each fraction retained on Length gauge in gms	
63.00	50.00	W1	X1	P1	33.90	F1			P1	-	E1	
50.00	40.00	W2	X2	P2	27.00	F2			P2	81.00	E2	
40.00	31.50	W3	X3	P3	21.50	F3			P3	58.00	E3	
31.50	25.00	W4	X4	P4	16.95	F4	8.8	294.31	P4	-	E4	
25.00	20.00	W5	X5	P5	13.50	F5	11.78	295.43	P5	40.50	E5	
20.00	16.00	W6	X6	P6	10.80	F6	12.28	197.38	P6	32.40	E6	
16.00	12.50	W7	X7	P7	8.55	F7	15.63	202.98	P7	25.50	E7	
12.50	10.00	W8	X8	P8	6.75	F8	23.71	217.20	P8	20.20	E8	
10.00	6.30	W9	X9	P9	4.89	F9	28.44	90.85	P9	14.70	E9	
		ΣW 10206.0						ΣXY 1298.15	ΣP 6407.0	ΣE 706.0		

Flakiness Index = 12.98%

Elongation Index = 11.02%

Result : Combined Flakiness & Elongation index

Comments: Maximum allowable Combined flakiness and Elongation indices value for Bituminous Macadam is 35%.

Note:

→ The results indicated above are based on the tests carried out on the samples received in the laboratory.

For Civil Experts Consultants

G. Mohy

Authorised Signatory

[Signature]

CECTC/BBMP/KRIDL/W.No.14/BM/Shape/2017-18
 08.06.2017
 1507161000